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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/786,236

02/26/2004

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EXAMINER

RECEK, JASON D

ART UNIT

PAPER NUMBER

2109

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DELIVERY MODE

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/786,236

Applicant(s)

JOHANSSON, FREDRIK

Examiner

Jason Recek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>26 February 2004</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

This is in response to application 10/786236 filed on February 26<sup>th</sup> 2004 in which claims 1-21 are presented for examination.

### ***Status of Claims***

Claims 1-21 are pending, of which claims 1, 8, 15 and 19 are in independent form.

Claims 4-6 and 14 are currently objected to.

Claims 4, 6-7 and 9-21 are currently rejected under 35 U.S.C. 112 second paragraph.

Claims 1-16 and 19-21 are currently rejected under 35 U.S.C. 102(e).

Claims 17-18 are currently rejected under 35 U.S.C. 103(a).

### ***Specification***

1. The abstract of the disclosure is objected to because it references Fig. 1. Correction is required. See MPEP § 608.01(b).
2. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (pg. 3 ln. 10-17). Applicant is required to delete

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the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

### ***Claim Objections***

1. Claim 4 is objected to because of the following informalities: the phrase “the Mobile Node de-register” should read “the Mobile Node de-registers”. Appropriate correction is required.
2. Claim 5 is objected to because of the following informalities: the term “DHCP” should be spelled out. Appropriate correction is required.
3. Claim 6 is objected to because of the following informalities: the phrase “the Home Agent allocate the address” should be “allocates”, the term “NAI” should be spelled out, and the phrase “the Mobile Node as unique identifier” should read “as a unique ...”. Appropriate correction is required.
4. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim which depends from a dependent claim should not be separated by any claim which does not also depend from said dependent claim. It should be kept in mind

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that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

5. Claim 14 objected to because of the following informalities: it depends from claim 10 however there are intervening claims which do not also depend from claim 10. Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 4, 6-7 and 9-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 4 recites the limitation "the lease" in line 2 and "the Mobile Node's registration" in lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

9. Claim 6 recites the limitation "the centralized DHCP server" in lines 2-3, "the NAI" in line 3 and "the client-identifier option" in lines 3-4. There is insufficient antecedent basis for these limitations in the claim.

10. Claim 7 recites the limitation "the allocated address" in line 2 and "the lease" in lines 2-3. There is insufficient antecedent basis for these limitations in the claim.

11. Claim 9 recites the limitation "the lease" in line 2. There is insufficient antecedent basis for this limitation in the claim.

12. Claim 10 is rejected because it depends from a rejected claim.

13. Claim 11 recites the limitation "the mobile" in line 2. There is insufficient antecedent basis for this limitation in the claim. Claim 11 is further rejected because the phrase "the mobile registers with *it*" is indefinite. The word *it* raises a question as to what is being referred to, the home agent or the lease.

14. Claim 12 recites the limitation "the centralized server" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

15. Claim 13 recites the limitation "the client-identifier option" in line 3. There is insufficient antecedent basis for this limitation in the claim.

16. Claim 14 recites the limitation "the Mobile Node's NAI" in line 3, "the client-identifier option" in line 3 and "the mobile" in lines 3-4. There is insufficient antecedent

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basis for these limitations in the claim. Claim 14 is further rejected because the phrase "the mobile registers with *it*" is indefinite. The word *it* raises a question as to what is being referred to, the home agent or the lease.

17. Claim 15 recites the limitation "the home network" in line 6, "the information" in line 7, "the lease" in line 8 and "the registration reply" in line 9. There is insufficient antecedent basis for these limitations in the claim. Also, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

18. Claim 16 recites the limitation "the address pool" in line 4. There is insufficient antecedent basis for this limitation in the claim.

19. Claim 17 is rejected because it depends from a rejected claim.

20. Claim 18 recites the limitation "the client" in line 2, and "the DHCP server" in line 3. There is insufficient antecedent basis for these limitations in the claim. Also, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

21. Claim 19 recites the limitation "the advertisements" in line 3 and "the centralized server" in line 5. There is insufficient antecedent basis for these limitations in the claim.

22. Claim 20 is rejected because it recites "characterized in that *if* said server is a DHCP server" the word *if* creates uncertainty of the claim scope when the condition (DHCP server) is not met, currently the claim seems to have no further limitations if the condition is not met and thus the boundary of the claim scope is unclear which makes the claim indefinite.

23. Claim 21 recites the limitation "the lease" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

24. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

25. Claims 1-7 and 15-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Taniguchi U.S. Pat. 6,928,282 B2.



Regarding claim 1, Taniguchi discloses "a method for a mobile node to acquire a home address where the mobile node is located in a foreign network" as a mobile node in a foreign network (col. 6 ln. 11) "said home address is acquired dynamically from a centralized server maintaining a pool of address" as dynamically acquiring an address from a DHCP server that has addresses pooled (col. 6 ln. 8-11, 29-31).

Regarding claim 2, Taniguchi discloses "a home agent allocates said address on behalf of the mobile node from the centralized server" as a home agent that allocates the address (col. 6 ln. 8-9) from a DHCP server (col. 5 ln. 64-66), and "using a unique identifier provided by the mobile node" as a mobile node user identifier (col. 7 ln. 24-28).

Regarding claim 3, Taniguchi discloses "the home agent maintains the allocated address on behalf of the mobile node" as a home agent that contains an address management module which maintains the allocated address (col. 6 ln. 14-20, Fig. 2).

Regarding claim 4, Taniguchi discloses "the home agent stops maintaining the lease when the mobile node de-register or when the mobile node's registration times out" as having lease times for addresses and releasing them when the time expires (col. 7 ln. 62-63).

Regarding claim 5, Taniguchi discloses "the centralized server uses the DHCP protocol" as a DHCP server (col. 5 ln. 64-65, Fig. 1).

Regarding claim 6, Taniguchi discloses “the home agent allocate the address on behalf of the mobile node form the centralized DHCP server” as a home agent that allocates the address (col. 6 ln. 8-9) from a DHCP server (col. 5 ln. 64-66), and “using the NAI provided by the mobile node as a unique identifier in the client-identifier option” as allocating based on a mobile node user identifier (col. 7 ln. 24-28, col. 11 ln. 13-20).

Regarding claim 7, Taniguchi discloses “the home agent maintains the allocated address on behalf of the mobile node by renewing the lease when it is about to expire” as a home agent that extracts an address before a time-out and re-registers that address (col. 3 ln. 38-43).

Regarding claim 15, Taniguchi discloses “a method for a mobile node to acquire a home address while visiting a foreign network, characterized in that the mobile node send a registration request to its home agent, where it requests to receive a dynamically allocated address” as a mobile node sending a request to a home agent to receive an address while on a foreign network (col. 6 ln. 8-11), “the mobile node identifies itself through a unique identifier” as a NAI (col. 11 ln. 13-20), and “the home agent uses this unique identifier when sending an address allocation request to a centralized server located in the home network of the mobile node” as the home agent using the NAI (col. 7 ln. 24-28), “that the home agent stores the information received from the server in a table in order to be able to maintain the lease” as a home agent maintaining the IP

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address lease in a table (col. 7 ln. 43-45), and “the allocated address is returned to the mobile node in the registration reply” as returning the address to the mobile node (col. 11 ln. 60-61).

Regarding claim 16, Taniguchi discloses “the mobile node uses the address received in the registration reply as its home address” as the mobile node using the address it received (col. 6 ln. 10-11), and “the home agent continues to maintain the lease towards the server handling the address pool as long as the mobile node updates its registration” as the home agent managing the address (col. 6 ln. 14-20).

26. Claims 8-14 and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Chandra et al. US 2003/0217180 A1.

Regarding claim 8, Chandra discloses “a method for a mobile node to acquire a home address where the mobile node is located in its home network, characterized in that said mobile node acquires the home address directly from a centralized pool of addresses using a unique identifier that it later can provide to a home agent” as a client requesting an address from a DHCP server (pg. 3 paragraph 27) and using a NAI (pg. 2 paragraph 12).

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Regarding claim 9, Chandra discloses “the mobile node maintains and renews the lease while located in its home network” as a mobile node that is responsible for its own address management while on the home network (pg. 3 paragraph 28, 33, 35).

Regarding claim 10, Chandra discloses “the mobile node stops maintaining the lease when the mobile node moves to a visited network and registers with its home agent” as a mobile node moving to a foreign network (pg. 4 paragraph 42), is no longer in direct communication with DHCP server (pg. 4 paragraph 43) and registers with the home agent (pg. 4 paragraph 43).

Regarding claim 11, Chandra discloses “the home agent takes over the maintenance of the lease when the mobile registers with it when moving out from its home network” as the mobile node registering with the home agent and the home agent creates the necessary bindings to allow the mobile node access (pg. 4 paragraph 44) when the mobile node moves to the foreign network.

Regarding claim 12, Chandra discloses “the centralized server uses the DHCP protocol” as a DHCP server (pg. 4 paragraph 41).

Regarding claim 13, Chandra discloses “the mobile node acquires the address directly from a centralized DHCP server using its NAI as unique identifier in the client-

identifier option” as a mobile node sending a request with a NAI to identify itself (pg. 2 paragraph 12).

Regarding claim 14, Chandra discloses “the home agent takes over the maintenance of the lease by sending a DHCP request with the mobile node’s NAI in the client-identifier option to the DHCP server when the mobile registers with it when moving out from its home network” as the home agent sending DHCP requests when the mobile node moves off the network (pg. 4 paragraph 42-44).

Regarding claim 19, Chandra discloses “a method for a mobile node to acquire a home address where the mobile node that starts when located on its home network, characterized in that the mobile node hears the advertisements from its home agent without sending a registration request to the home agent, that mobile node acquire its home address by sending an address allocation request to the centralized server of its home network” as a mobile node getting an advertisement from a home agent for the purpose of acquiring an address from a server on the home network (pg. 3 paragraph 27), “using a unique identifier” as a NAI (pg. 2 paragraph 12), and “that the server allocates an address and send it back to the mobile node” as assigning an address to the mobile node (pg. 3 paragraph 30).

Regarding claim 20, Chandra discloses “if said server is a DHCP server, the mobile node sends a DHCP discover message to determine where the server is, that, in

response, it gets a suggestion on an address, and that the mobile node request to allocate the suggested address by sending a DHCP request” as a DHCP server, sending discover messages, and in response getting an offer, and sending a request message (pg. 3 paragraph 30).

Regarding claim 21, Chandra discloses “when the mobile node moves from its home network to a visited network where it can no longer maintain the lease with the centralized server, the mobile node will request dynamic allocation of home address in its registration request to inform the home agent to take over the maintenance” as a mobile node roaming to a foreign network (pg. 4 paragraph 42) that requests DHCP (pg. 4 paragraph 43) and then the home agent binds and manages the address (pg. 4 paragraph 44), “included in this registration request, the mobile node sends the same unique identifier as used when allocating the address in its home network” as using a NAI (pg. 2 paragraph 12), “the home agent will requests an address from the centralized server using the same identifier” as the home agent requesting an address (pg. 4 paragraph 44), “the server allocates the same address as the mobile node had allocated when located in its home network” as the mobile node indicates it already had an address (pg. 4 paragraph 43), and “the home agent thereafter maintains the lease as long as the mobile node updates its registration” as the home agent maintains the bindings (pg. 4 paragraph 44).

***Claim Rejections - 35 USC § 103***

27. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

28. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi in view of Chandra.

Regarding claim 17, Taniguchi does not disclose “when the mobile node moves from the visited network to its home network, it will de-register from the home agent” however this is taught by Chandra as de-registering by the mobile node when returning from a foreign network (pg. 3 paragraph 39, Fig. 3). Chandra also teaches “upon receiving a de-registration request, the home agent removes the entry for that address from its table and stops maintaining the lease towards the server” as the home agent removing the address bindings for the mobile node (pg. 3 paragraph 40), and “the mobile node takes over the maintenance of the leased address” as the mobile node taking responsibility for address management (pg. 3-4 paragraph 40).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Taniguchi with the de-registration process of Chandra for the purpose of freeing up the services of the home agent. The motivation for doing so is that there are only a finite number of addresses the home agent may handle, thus when

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its services are no longer needed by a mobile node it would be obvious to have that node de-register and communicate directly with the DHCP server once back on the home network.

Regarding claim 18, Taniguchi does not disclose "the mobile node takes over the maintenance of the lease by the client sending a request to renew the lease using the same unique identifier to the DHCP server" however this is taught by Chandra as the mobile node taking over maintenance of the lease and communicating directly with the DHCP server (pg. 3-4 paragraph 40) using a unique identifier (pg. 2 paragraph 12).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Taniguchi by having the mobile node take over the lease which is taught by Chandra for the purpose of freeing up the services of the home agent. The motivation for doing so is that there are only a finite number of addresses the home agent may handle, thus when its services are no longer needed by a mobile node it would be obvious to have that node de-register and communicate directly with the DHCP server once back on the home network.



***Conclusion***

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leung et al. US 2003/0217145 A1 discloses reusing addresses for mobile IP clients.

Ton US 2002/0067704 A1 discloses mobile IP services with multiple home agents.

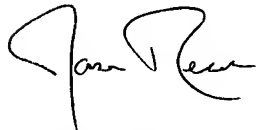
Syvanne et al. US 2003/0117993 A1 discloses mobile IP with firewalls.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Recek whose telephone number is (571) 270-1975. The examiner can normally be reached on Mon - Thurs 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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08/30/07

  
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